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## THE SCORED PEBBLES OF SIDON.

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South of the city of Sidon, in the region of the great Phoenician burying-grounds, there have been found from time to time numerous small, flat stones which have aroused the interest of archaeologists. They are beach-pebbles of a fine-grained and rather hard limestone, roughly elliptical or nearly circular in shape, with an average diameter of about two inches, and approximately half an inch in thickness. These pebbles are scored on both sides with shallow grooves in straight lines in every variety of number and arrangement, no two patterns being just alike. The natives, who collect the pebbles and offer them for sale, generally believe them to be inscribed, and regard them as talismans; the name by which they are usually called,  $ru'\bar{u}s$   $mutaw\bar{u}lia$ , giving them a purely fanciful connection with certain customs of the Shīcite sect of the Metāwileh.

As far as I am aware, only one archaeologist of note has published an opinion in regard to these objects. Macridy Bey, of the Imperial Ottoman Museum in Constantinople, in his report of excavations entitled Le Temple d' Echmoun à Sidon (Paris, 1904), devoted an appendix, pp. 52 f., to this His conclusions, briefly stated, are the following. The stones are normally found in the débris at the mouths of tombs in the ancient necropolis. In all probability, they were used by the Phoenician workmen to sharpen the tools with which they cut these tombs in the rock; hence the grooves, worn by the points of these implements. I reproduce here Macridy's half-tone illustration, made from photographs (somewhat reduced in size) showing the two faces of four of the pebbles. His words are these: "Des ouvriers très expérimentés me dirent que la présence de ces galets dans un champ dénote le voisinage d'un caveau, ce que j'ai moi-même constaté avec la différence que les caveaux étaient tous ouverts. Au cours de mes fouilles dans la nécropole sidonienne, j'ai recueilli plusieurs de ces galets, mais toujours dans les débris qui comblaient un puits phénicien ou bouchaient l'entrée d' un caveau romain. Cette particularité me porte à croire que ces galets ne sont que des pierres à aiguiser servant à affiler les pointes ou n' importe quel instrument tranchant dont se servait l'ouvrier attaquant le rocher. La surface du caillou n' offrant plus une place pour le frottement de l' outil, il était rejeté avec les débris de pierre qui servirent, plus tard, à la fermeture du puits et où il est retrouvé encore aujourd'hui."

The hypothesis here presented is attractive at first sight, but hardly provides a satisfying explanation of all the peculiar features of these small objects. Why the small and remarkably uniform size of the stones? The supposed workman would have found a diameter of three inches better adapted to his purpose than one of two, or of one and three-quarters.

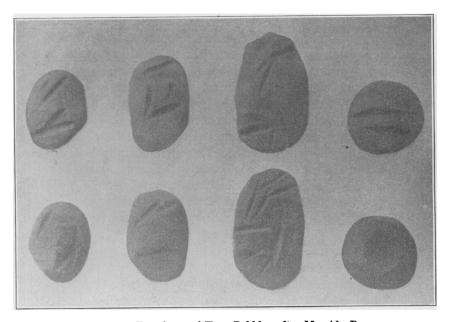


Fig. 1. Two faces of Four Pebbles after Macridy Bey.

Why the care taken to have them always flat on both sides, of approximately the same shape, and of a uniform thickness? It is noticeable, too, that many of the grooves are cut near the circumference, rather than in the center, even when the center offers a smooth and unused surface.

I first became acquainted with these pebbles in the fall of 1900, when Mr. William K. Eddy and Dr. George A. Ford, of the American Presbyterian Mission in Sidon, showed me numerous specimens which they had collected. I was at once struck by two features which appeared to me to be common to all these specimens, and those which I have since seen have only confirmed the observation. First, the grooves were scored with a wheel; and second, the marks on the one face of any pebble form a pattern which is more or less distinctly reproduced on the other face. This latter fact seemed to me so remarkable that I photographed fourteen of the pebbles of Mr. Eddy's collection which showed this feature most clearly,

Professor Jewett, who was with me at the time, making the negatives with his camera. Both negatives, unfortunately, were lost in the subsequent journeying. A sun-proof had been made from one of them, however, and it happened that I had preserved it; from this the accompanying illustration is made.

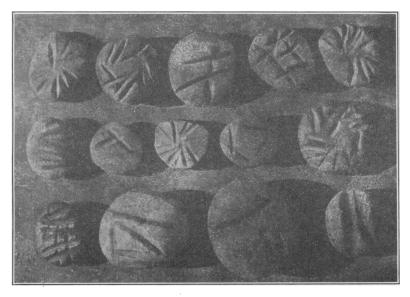


Fig. 2. Fourteen Pebbles of Mr. William K. Eddy's Collection.

In order to give a general idea of what the other photograph would have shown, I subjoin a drawing intended to picture the reverse side of these same pebbles. Since the drawing is purely fanciful, it can have no value beyond that of representing my own imperfect recollection of the nature and extent of the correspondence. I can add with assurance, however, that in no one of these fourteen examples could there be any doubt that the scheme of scoring on the one side was intended to be the counterpart of that on the other side.

This rule of the approximate correspondence, in arrangement, of the grooves on the two faces of each of these stones holds good in the case of every specimen which I have myself seen. It is plainly exemplified in all but one of those which are shown in Macridy's illustration (above, Fig. 1), though in the reproduction of the photographs some of the grooves are almost invisible. The small circular stone at the right appears to be

an exception. Perhaps if it could be examined, the exception would be found apparent rather than real; or it may be that such a pebble had a special part to play (see below). I think that it is also possible to see in these photographs the regular curve of the typical incision, showing that the grooves were cut with a wheel.

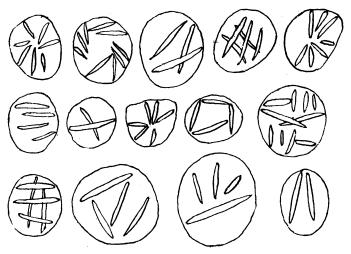


Fig. 3. Sketch from memory of Reverse Side of Pebbles shown in Fig. 2.

These facts seem to make it plain that the manner of scoring these pebbles was not accidental, but deliberate; and that its purpose was to make each one of them easily recognizable. The most natural conclusion is, that the pebbles were used in playing some sort of game, in which they were thrown or tossed in such a manner that they might fall with either side up. Even if the pattern on the one side is reproduced somewhat carelessly and inexactly, the resemblance, added to the shape of the stone, would be sufficient for identification, even at some distance. As to the precise nature of this game, I can offer no conjecture. There is no modern game played in that country, so far as I am aware, that could throw light upon the question. Possibly someone who is more familiar than I with such matters can give the needed information.

The specimens found by Macridy himself were picked up at the mouth of tombs in the old necropolis. Many others, however, have been found at a long distance from any tomb. Mr. Eddy, who told me of the popular belief regarding these objects, showed me a level, open field south of Sidon,

between the city and the necropolis and somewhat nearer the latter, which he declared to be the chief source of those scored pebbles of whose provenience he had exact knowledge. He had found them there himself, and said that it would not be difficult to find others. In this field there was no trace of any tomb, nor did it seem likely, from the nature of the

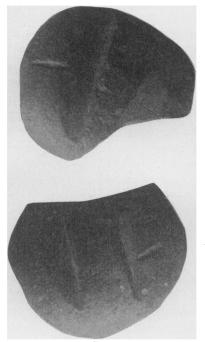






Fig. 5.

ground, that it had formed a part of the ancient necropolis. I seem to remember that Mr. Eddy spoke of having personal knowledge that some of the pebbles had been found in the débris of tombs, but my recollection as to that is indistinct.

I have in my possession one specimen only; I cannot remember now whether I picked it up myself in the fields about Sidon or received it from someone else. It is defective, a piece having been broken off, but it presents some interesting features. The main pattern consists of two broad and deep grooves crossed at one end by a shallower groove (on one of the two faces this transverse groove was broken off with the missing piece, in all probability, since the place to look for it would have been just there).

At the circumference, at the ends of two axes at right angles to each other passing through the center, the stone has been cut away symmetrically, leaving four elliptical facets of equal size, on any one of which the stone stands upright and securely if on a smooth surface. On the one side of the stone, just below one of the facets and on a line which if produced would pass through the end of the facet, is a small and sharply cut groove, which is filled with red paint in the same manner in which the incised characters of Phoenician and other ancient inscriptions are often filled. On the other side of the stone, in the position exactly corresponding, there is a similar groove likewise filled with red paint. The paint appears nowhere else on this specimen nor on any other which I have seen. Obviously, this correspondence in marking is not accidental. Of course the possibility suggests itself, that this specimen had a special part to play in the supposed game; that the four carefully cut facets on its circumference were not merely ornamental; that one of the properties of the game may have been a smooth board or a slab of stone; but such conjectures are worthless in the absence of further information. The manner of using the red paint, however, seems to me to confirm the opinion already generally held, that the scored pebbles date from the Phoenician period rather than from any later time.

After the manuscript of the foregoing had been submitted to the editor, President Moulton, I was informed by him that he had in his possession four of the scored pebbles from Sidon. He very kindly offered to have them photographed, and to put the photographs at my disposal for further illustration of this article. I gladly availed myself of the offer, and append the illustrations herewith; the one showing the obverse, and the other the reverse, of the four pebbles. They will be found to confirm the conclusions already reached.

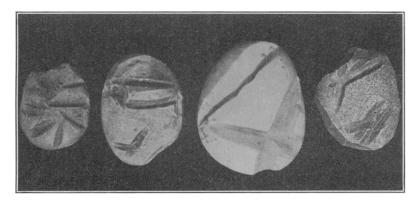


Fig. 6. Obverse of Four Pebbles from Collection of President Moulton.

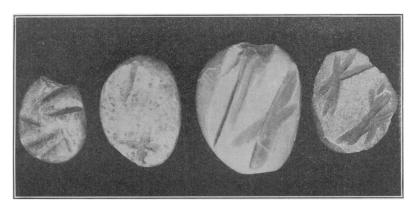


Fig. 7. Reverse of Four Pebbles from Collection of President Moulton.